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From: Whitworth, Steve C
Sent: Wed 2/24/2016 10:13:16 PM
Subject: SO2 Ambient Air Quality Characterization
[Air Quality Modeling Analysis-Labadie 12012015.pdf](#)

Mike – Ameren submits the request below that is accompanied by the attached file related to the air quality modeling characterization for ambient SO2 concentrations in the vicinity of the Labadie Energy Center.

On December 9, 2015, the Missouri Department of Natural Resources submitted to Region VII the attached demonstration materials that have been prepared in accordance with the requirements of Section 3.2 of the Guideline on Air Quality Models (Appendix W). Importantly, such alternative model demonstration materials include a peer-reviewed scientific article prepared by AECOM and published in the Journal of Air and Waste Management. Additional articles on the Low Wind Speed have been prepared by AECOM and are expected to be published shortly in that scientific journal. The report that provides the basis for the use of the low wind speed option has been previously provided to MDNR and Region VII and is attached again to this e-mail.

As USEPA Air Quality Assessment Division noted in its recent memorandum (“Clarification of the Approval Process for Regulatory Application of the AERMOD Modeling System Beta Options”, issued December 10, 2015); see

http://www3.epa.gov/ttn/scram/guidance/clarification/AERMOD_Beta_Options_Memo-20151210.pdf

"the incorporation of beta options is beneficial to the entire stakeholder community, because these new models can be scientifically reviewed and fully evaluated by the community (thereby shortening the time it might take to otherwise formally propose and adopt the new model option into a preferred model)". This is particularly true in the case of the Ameren Labadie Energy Center where, depending upon the AERMOD options chosen, the model demonstrates either attainment or nonattainment with the SO2 standard. Our modeling expert in this matter, Mr. Robert Paine of AECOM, made presentations at both the Tenth and Eleventh Modeling Conferences sponsored by EPA and described how the AERMOD model contains a bias to over predict under stable/light wind conditions. EPA's proposed rulemaking acknowledges this over prediction bias, and its proposed low-wind beta options ("ADJ_U*" in AERMET and "LOWWIND3" in AERMOD) correct for this over prediction.

The monitoring data collected by Ameren during 2015 reflects a significant over-prediction bias

in the AERMOD model absent the low-wind corrections. In fact, QA/QC data collected from air monitors near Labadie and submitted to MDNR reflect air quality well below the 2010 SO₂ NAAQs. Put simply, those results should be celebrated by EPA, not discounted or ignored. The low wind model options used by AECOM, as described in the attached materials, have been proposed for acceptance in EPA's pending rulemaking. Once that rulemaking is finalized, the low wind option would be included in the preferred model and can be used without the need for a Case-by-Case approval.

As the AQAD memorandum makes clear, the participation of the Model Clearinghouse allows for national consistency in approvals and complete transparency with the stakeholder community. Such transparency is particularly important here so that the entire stakeholder community can be assured that regulatory decisions are based on the appropriate technical merits. Accordingly, we hereby request the following: (1) a meeting with USEPA Region VII technical staff as soon as possible to discuss the alternative model demonstration; and (2) so as to assure complete transparency, that Region VII submit the above material and request for Case-By-Case approval to AQAD for review and approval as soon as possible in light of the pending designation decision.

As you are aware, the public comments period terminates in 30 days after publication in the federal register. Accordingly, Ameren is prepared to meet with Agency as soon as possible to discuss this issue.

Note that this information is also supplemented by our submittal made on February 16 that included updated information related to the modeling and monitoring characterization for ambient SO₂ concentrations in the vicinity of the Labadie Energy Center.

Please contact me at your convenience in response to this submittal.

Best Regards,

Steve

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